

CHAPTER 1—BACKGROUND AND OVERVIEW

PURPOSE OF THIS MANUAL

The purpose of this technical manual is to document the technical aspect of the 1998–99 Maine Educational Assessment (MEA). In the fall of 1998, students in grades 4, 8, and 11 participated in the first administration of the new MEA; during this administration writing was assessed. In the spring of 1999, students in grades 4, 8, and 11 were administered tests in English language arts (reading), mathematics, science and technology, social studies, health education, and visual and performing arts. This report provides information about the technical quality of those assessments, including a description of the processes used to develop, administer, and score the tests and to analyze the test results. This report is intended to serve as a guide for replicating and/or improving the procedures in subsequent years.

While some parts of this technical report may be used by educated laypersons, the intended audience is experts in psychometrics and educational research. The report assumes a working knowledge of measurement concepts such as “reliability” and “validity,” and statistical concepts such as “correlation” and “central tendency.” In some chapters, the reader is presumed also to have basic familiarity with advanced topics in measurement and statistics.

LEARNING RESULTS

Following enactment of the Education Reform Act of 1984, Maine schools undertook a wide variety of initiatives designed to improve the quality of teaching and learning. Many of the lessons learned from those initiatives informed *Maine’s Common Core of Learning*, a document published in 1990 that articulates a common vision for education in Maine by defining the knowledge, skills, and attitudes that all students should possess upon graduation

from high school. In 1993, the Legislature directed the State Board of Education to undertake the next step in education reform by establishing a Task Force on *Learning Results* that was directed to:

“develop long-range education goals and standards for school performance and student performance to improve learning results and recommend to the commissioner and to the Legislature a plan for achieving those goals and standards.”

After substantial work, the Task Force presented to the Legislature, in January of 1996, a report that contained a series of recommendations together with a set of standards, a plan for implementation, and proposed legislation. After a series of intense hearings during the 1996 Legislative Session, the Legislature adopted much of the work of the Task Force and directed the Department of Education and the State Board of Education to continue to develop the *Learning Results*.

Acting on the recommendations of the Task Force, the Legislature adopted six Guiding Principles that describe the characteristics of a well-educated person. To fulfill these principles, the Legislature required that the Department of Education and the State Board of Education develop *Learning Results* within the following eight areas:

Career Preparation

English Language Arts

Health and Physical Education

Mathematics

Modern and Classical Languages

Science and Technology

Social Studies

Visual and Performing Arts

These are not “subjects” in the same sense that we use the word when referring to courses in school. They are areas of learning that will in some cases cut across a number of discrete courses or disciplines.

In response to the legislative directive, the Commissioner appointed a working group, known as the Critical Review Committee, to prepare a draft of standards for consideration by the State Board of Education and by the Legislature. The Committee met on numerous occasions during the summer and fall of 1996 to produce this revised document, which was approved in May of 1997 by the 118th Legislature.

PURPOSES OF THE MEA

The *Learning Results* are just one part of an educational system. As goals for what all students should know and be able to do upon finishing school, they are not written to prescribe a minimum of “passing” standard. The setting of minimum requirements is the function of assessments that are separate from the creation of academic goals.

Because some students are ready for assessment at earlier stages than others, no assumption is made about when a standard might be achieved.

The statute passed in April of 1996 includes the following provisions relating to assessment:

Student achievement of the learning results...must be measured by a combination of state and local assessments to measure progress and ensure accountability. The 4th-grade, 8th-grade, and 11th-grade results of the Maine Educational Assessment, the “MEA,” are the state assessments used to measure achievement of the learning results. The 4th-grade and 8th-grade MEA must be used to measure achievement of the learning results beginning in the 1998-99 school year. Local school administrative units may develop additional assessments to measure achievement of the learning results, including student portfolios, performances, demonstrations, and other records of achievements.

An Assessment Design Team comprised of Maine educators and assessment specialists has been established to redesign state level assessments and to assist in development of high-quality local assessments that will be used to measure student achievement of the *Learning Results*. The statewide assessment system they are developing will:

align with Maine's *Learning Results*;

utilize multiple measures of learning;

ensure fair and equitable assessment for all students;

utilize recognized, relevant technical standards for assessment;

provide understandable information to educators, parents, students, the public, and the media;

provide professional development opportunities for teachers, administrators, and future educators; and

be practical and manageable.

ORGANIZATION OF THIS MANUAL

The organization of this manual is based on the conceptual flow of an assessment's life span; it begins with the initial test specification and addresses all the intermediate steps that lead to final score reporting. Section I covers the development of the MEA tests. It consists of eight chapters, covering general design issues, the test development process, and the specific designs of the English language arts, mathematics, science and technology, social studies, visual and performing arts, and health education assessments. Section II consists of a single chapter describing the administration of the tests. Section III contains three chapters, covering scoring, standard setting, equating, and scaling. Section IV presents four chapters, addressing the technical characteristics of the tests. Topics covered include item analysis, reliability, validity, and reporting. We have also included two additional sections: Section V contains references and Section VI contains the appendices.